

Draft “initial work plan” of the Article 36 Task Force.

This “chairman’s draft” compiled by Jack Cushman and revised 7/27 to reflect public input and discussion since 7/21 comment meeting.

## PREAMBLE

This document, called for in the Select Board’s charge to the newly appointed Article 36 Task Force, is a first step in our work to help the town’s governing bodies make addressing the climate crisis a prominent priority in all their decisions over the coming decades.

For the past several years, the citizens and public leaders of Norwich have grappled with the need to reduce emissions of greenhouse gases essentially to zero in the decades ahead. This is a widely accepted and urgent goal, backed by science and embedded in international, national and local policies.

The Task Force strives to make its recommendations, to be developed with extensive consultation in the next five months, fall in line with the best available science. At the same time, it seeks broad consensus so that its recommendations may best reflect the will of our town as a whole.

Countless authoritative sources have urged that the whole world reach net zero carbon emissions around mid-century, and warned of grave and imminent consequences if this goal is not achieved. This is an obligation of international, national, regional, state and local governments, as well as businesses and individuals. For examples, see the following recent or forthcoming reports:

A [recent draft](#) of the Intergovernmental Panel on Climate Change’s forthcoming review and assessment of the current science says: “We need transformational change operating on processes and behaviours at all levels: individual, communities, business, institutions and governments.”

The authoritative International Energy Agency, in a recent comprehensive [report](#), calls for “nothing less than a complete transformation of how we produce, transport and consume energy.”

Citing a 90 percent probability that the warmest year ever will occur in the next five years, the head of the World Meteorological Organization called its prediction “yet another wakeup call that the world needs to fast-track commitments to slash greenhouse gas emissions and achieve carbon neutrality.”

Vermont’s latest statutory goal, contained in the Global Warming Solutions Act of 2020, would cut economy-wide emissions 40 percent below 1990 levels by 2030 and 80 percent below by 2050. In a sense, the work of the Article 36 Task Force parallels work by the statutory Vermont Climate Council that is underway to make these goals a reality, as required by law.

But Article 36 is narrowly targeted at cutting Norwich’s direct municipal purchases and combustion of fossil fuels -- emissions from activities that burn fossil fuels, paid for by our taxpayers and controlled by our municipal authorities. Economy-wide or individual consumption are beyond its scope, as are indirect emissions. We are looking at buildings, facilities, vehicles and equipment directly owned or controlled by our town government.

The latest Vermont progress report of the Energy Action Network, noting that meeting our state’s climate goals are now required by law under the Global Warming Solutions Act of 2020, finds that “reaching our GWSA requirements for 2025, 2030, and 2050 will require far more progress in the transportation and thermal energy sectors, in particular.” We agree.

Public commenters recommended that this report recognize a few steps that have already been taken, such as purchasing more fuel efficient police vehicles. Other public commenters noted that we have purchased equipment without regard to emissions, or decided that efficient approaches are too expensive or otherwise infeasible. They also have

called for better management of our fleets and buildings. At this stage, the Task Force is not making specific recommendations for actions, but is laying out a work plan.

The Vermont Climate Assessment and the work of the Vermont Climate Council will both soon reaffirm the benefits of urgent action, based on their work so far.

Yet despite wanting to do our part, Norwich continues to run up a [“carbon debt”](#) -- the equivalent in pollution terms of falling behind what we owe financially. If you take out a loan and don't meet the promised payments, the debt piles up for future payment. Similarly, if we commit as a nation, state or town to cutting our fossil fuel pollution, and don't deliver, we leave the costly task to future citizens, who also will suffer the effects of the global warming we are creating.

The principal source of greenhouse gas emissions is the uncontrolled combustion of carbon fuels and it is inescapable that these must be mostly phased out in coming years if our direct emissions are to be reined in.

## BACKGROUND

Article 36 was approved by voters at town meeting in 2019. It sought “immediate and sustained efforts to gradually and continually reduce the Town’s direct use of fossil fuels....” The article stated that the eventual goal was zero use of fossil fuels. It urged an immediate start but set no ultimate deadline.

In 2021, the Select Board charged a new Article 36 Task force to “initiate work towards an aggressive and comprehensive work plan” to eliminate the town’s direct (taxpayer-funded) consumption of fossil fuels as envisaged by Article 36. Five members were appointed and their meetings and related documents are published on the Town of Norwich official web page, with links to other document folders open to the public.

The Task Force charge requires an “initial work plan” to be submitted to the Select Board by August 1, and sets several requirements for what must be included in the work plan.

This document responds to that charge. It was developed in a series of open public meetings and the Task Force requested the public to comment on a draft in July.

As called for by the Charter (Task Force Scope, S.3) this document includes:

- a) definition of scope;
- b) summary and analysis of “work-to-date”;
- c) engagement plan for other committees
- d) “audit” of scope, including priorities, goals and outcomes.

Working documents of the committee and historical documents pertaining to the Task Force’s work may be attached by reference or as addenda to this report. Suggestions from the public for attachments or references will be considered by the Task Force. Documents for attachment may be finalized at the July 29 meeting of the task force, or may be submitted later to conform with Open Meeting Law requirements. The committee continues to collect data for these purposes.

The Task Force anticipates a continuing and intensive collaboration with town entities and the public and we present in this report a proposed schedule for future activities and recommendations, including any actions that require approval by the Select Board, other town entities, or the voting public.

## A) DEFINITION OF SCOPE OF WORK

The charge to the Task Force requires this report to “define what constitutes a policy, program or project that advances the directives of Article 36 as it relates to the Town-owned buildings or fleet.”

The Task Force has drafted this two-paragraph definition for discussion:

*A “policy, program or project” under Article 36 is any measure or action approved by the town’s elected officials or managers that is designed to reduce tax-payer funded purchases (and combustion in municipal facilities or equipment) of fossil fuels including petroleum-based motor and heating fuels, natural gas, propane and coal.*

*To qualify as an Article 36 policy, program or project, any measure must be drafted in public meetings with public input, shall include a reasoned estimate of available reductions in fossil fuel consumption, and should be verifiable after the fact to document reductions that are actually achieved. Where possible, estimates of reduced fossil fuel consumption should be translated as well into estimates of greenhouse gas emissions averted, using standard conversion factors.*

To clarify, and without making any specific recommendations, here are some representative notional examples of a potential policy, program, and project:

Example of a “policy” — the Select Board could set mid-range objectives and target dates for replacement of town owned vehicles and equipment with all-electric vehicles as existing fleet ages and new models become available.

Here is an example of a “program” — the public works department or other agencies could revise mowing procedures, practices and schedules on public land. The objective would be to reduce fuel use while maintaining conservation values.

Here is an example of a “project” — the Select Board could establish financing and let a contract for energy conservation services at a public building that burns fossil fuels, with concrete expectation of fuel reduction.

## B: SUMMARIZE WORK-TO-DATE ON TOWN GREENHOUSE GAS EMISSIONS, WITH ANALYSIS

Task force members Aaron Lamperti and Eva Rosenbloom put considerable work into assembling the town’s past research on its greenhouse gas footprint, identifying and filling some of the gaps in the data, reorganizing and simplifying the data to make it more useful to the Task Force and the public and town managers.

This draft report contains a high-level breakdown of municipal emissions and additional data may be attached in the August 1 report when it is finalized. Members of the public have had access to draft data in our publicly accessible Google Docs folder, where the developing information has been openly and continuously updated.

This data gathering work continues, and will be a very significant contribution to policy making and decision making, because it will give us the firmest baseline of where we are and where our opportunities lie for cutting the direct use of fossil fuels by the town. Improving this baseline and accounting are a central element of the committee’s charge.

Two prominent conclusions can be reached from the work-to-date information. Neither conclusion is surprising.

Of Norwich’s estimated annual GHG emissions from direct municipal combustion of fossil fuel, the overwhelming majority comes from burning gas and oil in vehicles, equipment and buildings.

In detail: about two thirds of the carbon footprint comes from vehicles and equipment (that is, internal combustion engines) and about one third comes from heating fuels, in just a few main buildings.

We make the observation that ready-at-hand, “shovel ready” or otherwise proven and widely used technologies for replacing fossil fuels are currently more readily at hand for building and space heating than for certain kinds of vehicles and equipment -- although electric or other zero-emission technologies for the latter are arriving rapidly in the coming few years. We expect much of our work to focus on how best to phase in clean technologies.

As described in our minutes of 7/21, a member of the public commented that a significant (but uncalculated) portion of our fossil fuel use could be controlled by management of the fleet, thermostat controls, and other ready-to-hand operational changes requiring no new technology or significant technologies. Solutions like these are beyond the scope of this initial work plan but surely will be examined by the Task Force. The public is invited to provide any suggestions throughout our process.

Task force member Rosenbloom, who has expertise in greenhouse gas emissions budgeting, has developed the following estimates for FY2019 that show how the main contributors to greenhouse gas emissions from direct fossil fuel use in municipal vehicles, equipment and buildings are distributed. She has estimated the overall carbon footprint of the town at 347 metric tonnes of carbon dioxide, almost all of it from buildings and the town fleet:

FY2019: FF/GHG Sources by Combustion Type										
A	B	C	D	E	F	G	H	I		
1	FY2019: FF/GHG Sources by Combustion Type									
2	Cat.	Sub Cat.	Description	Reference	Fuel/Source	Direct FF	GHGe MT	% of dept	% of TON	
3										
4			Stationary Combustion / Buildings	Tracy Hall		Yes	48.45	45.12%	14.64%	
5				Safety Bldg		No	3.33	3.10%	1.01%	
6				Fire Apparatus Bay		Yes	17.03	15.86%	5.15%	
7				DPW - Town Garage		Yes	36.72	34.20%	11.10%	
8				Transfer Station		Yes	1.85	1.72%	0.56%	
9	<b>Stationary Combustion Subtotal</b>						<b>107.38</b>		<b>32.45%</b>	
10										
11			Mobile Combustion / Vehicles	Police Department		Yes	20.77	9.50%	6.28%	
12				Fire Department		Yes	10.28	4.70%	3.11%	
13				DPW		Yes	187.49	85.79%	56.66%	
14	<b>Mobile Combustion Subtotal</b>						<b>218.54</b>		<b>66.03%</b>	
15										
16										
17				* does not include fugitive emissions						

Eva’s extensive research, which also includes department-by-department data and other details, may be incorporated by reference and as an attachment to this report. Her work may be viewed under the tabs at the bottom of this link:

<https://docs.google.com/spreadsheets/d/12yOED0ZzG8AjQrRoF7LIMPZ9NYlyWOb-SPkz1xNgPg/edit#gid=917384787>

The current version of this table is attached to this document for purposes of inclusion in the packet for our 7/29 meeting, as it is likely to become an attachment to the final version of this initial work plan.

We note that there are some gaps in the data, especially at the detailed level, and we expect to consider ways to fill them in. Examples for discussion include:

- Purchase log for all town entities by GHG impact
- GHG impact of operations in all town department reports
- GHG impact of all proposed activities or purchases

C) ENGAGEMENT PLAN FOR COLLABORATION

The task force members are well positioned for engaging with other town committees and entities. Lamperti is chair of the Energy Committee. Ciccotelli is a member of the Planning Commission. Gere is on the Select Board and is in regular contact with town managers and departments. Cushman is chair of the Solid Waste Committee. All other committees and town panels with overlapping interests will be kept informed and requested for input at each stage of our process, which is described in more detail below.

Because August is a difficult time to coordinate the schedules of task force members, officials, the public, etc., we expect to use the last month of summer to prepare for an active pace in the fall and through year end.

Lamperti developed a working schedule which we have followed so far this year, and which has the following future mileposts:

For the information of the public, whose comments are sought, and of town officials and committees, whose involvement is directed by the Select Board, here is a rough outline of work in progress and anticipated.

June and July:

Finalize FF and GHG baseline

Continue building FF/GHG reduction action list

Identify action list items needing analysis

Plan outreach to public for input on action list

July: Preparation of this report, with provision for public comment (July 21 information session, July 29 final Task Force approval of report to SB)

By August 1, 2021 -- Initial Work Plan to SB -- chairman's public-comment draft for 7/21 comment session , with time to incorporate comments by July 29 TF meeting.

August 26, 2021 - Standing meeting

**Reschedule due to calendar conflicts?**

Plan and incorporate public input to action list  
Ongoing analysis of action plan items

September 23, 2021 - Standing meeting

Finalize action list

Finalize analysis of action plan items

Selection of action(s) from list to recommend to SB for 2022 warrant

October 28, 2021 - Standing meeting

Initial draft of any potential 2022 warrant article(s)

Initial draft of task force report

November 25, 2021 - Standing meeting

**Reschedule - Thanksgiving**

Finalize warrant article(s)

Finalize task force report

December 15, 2021 - SB meeting

Deliver to SB both recommended article(s) and task force report

December 23, 2021 - Standing meeting

**Reschedule - XMas?**

Evaluate status of working group - dissolve and/or recommend renewal.

At our public comment session on July 21 (see minutes) Pamela Smith asked what possible warrant articles the Task Force thought might be forthcoming. Cushman replied that the Task Force has had no discussions on this question and has not decided that warrant articles will be recommended, but recognized this as a possibility it was committed to “no surprises” in presenting any such recommendations. Therefore its schedule is intended to provide early recommendations long before the January deadline for warrant articles.

Smith noted that the capital budgeting process begins as early as

September and that she was unsure how the Select Board would view warrant articles drafted after the budgeting process is well under way.

Cushman replied that this point was worth consideration, but said that he could imagine hypothetical warrant articles that did not involve capital spending or that offered an impetus toward spending in future years, as the task force envisions a possibly decades-long process of investment in climate action.

With this conversation in mind, and recognizing the value of the public comment, the Task Force asks the Select Board for specific guidance on the question whether the pace of recommendations described in this initial work plan meshes with the board's budgeting processes, and if not, what changes to the schedule might be called for.

#### D) SCOPE OF WORK / Priorities, Goals and Outcomes

The committee's priority is to recommend or describe concrete actions available to the town in the immediate years ahead that will significantly

and steadily reduce our direct municipal use of fossil fuels -- mainly from operating vehicles and equipment or heating building spaces.

Our goal is to present a systematic way of tracking fuel use in as “granular” a fashion as is practical; to mobilize town officers, officials, committees and citizens to help reduce our municipal use of fossil fuels; to present concrete actions to the town for approval; and to track the results.

Supporting materials:

To initiate future reviews, the Task Force has been working on increasingly detailed spreadsheets that indicate both where municipal fossil fuel consumption and pollution are concentrated, and where they may be opportunities for reductions.

One such spreadsheet, also available in our open Google folder, is attached to this draft because we are likely to approve it for attachment to this initial work plan at our final drafting meeting on July 29.

In potential attachments to this report and via our public-facing Google drive, we will continue to provide our latest draft estimates of consumption and pollution. We urge members of the public who require assistance accessing our working papers and documentation to contact us directly, as we are happy to provide paper or electronic copies of all our work.

In addition, in planning its future work, the Task Force has been working on a draft list for discussion purposes of nearly two dozen potential actions for review, analysis and possibly recommendation. These would all involve concrete steps to reduce direct use of fossil fuels.

At our comment session a member of the public asked if this list, which is not included as an attachment or by reference in our initial work plan because it is a work in progress, ranked potential actions in order of priority. Lamperti, who is assembling the document and updating it, replied that it

definitely does not represent a priority listing. It has not been approved by the Task Force and the public is urged to provide ideas for inclusion.

Members of the public and town officials are urged to look at supporting materials and to provide suggestions, comments, or recommendations. The draft spreadsheets are maintained and updated from time to time in the Task Force public folder at:

[https://drive.google.com/drive/mobile/folders/19jhlhaVpcRAQr\\_VvRBrN7F4-4YUXa89t](https://drive.google.com/drive/mobile/folders/19jhlhaVpcRAQr_VvRBrN7F4-4YUXa89t)

These drafts do not represent consensus recommendations or priorities, but they give a sense of the scope of work still facing the Task Force.

After finalizing our consumption and pollution spreadsheets, and our list of potential actions, here are examples of practices and procedures that the Task Force may review:

- Meet with each department head to review relevant actions and take input
- Extend list to indirect TON GHG emissions and resident emissions as appropriate
- Select a set of actions from list for implementation in 2022
- Select a set of actions to address remaining FF use/emissions in future years
- Draft initial plans for 2022 actions including warrant article language as appropriate
- Create rough schedule for future year actions for long term planning

We ask the Select Board and the town manager and other committees and commissions to confirm that this schedule is satisfactory, or to recommend changes.

## A FEW FINAL THOUGHTS

We note that there are several statutory and aspirational targets for Vermont as a whole to reduce its carbon footprint, and we urge that Norwich take a leading position in statewide efforts, meeting or exceeding statewide targets, and rapidly eliminate the growth in our carbon debt.

We note that Federal and state incentives, subsidies, and grants have recently become available or may become available in the months ahead, and the Task Force will work with the town to strengthen our efforts to gain financial support for Article 36 policies, programs or projects.

A member of the public, Doug Wilberding, commented on 7/21 that green financing, perhaps under auspices of the trustee of public funds, might be useful; Cushman said that the Task Force has not considered this at all and we mention it here as a possible item for our future agenda, with appreciation for the suggestion.

The Task Force recognizes that its work may not be done at the end of the year, or the task of meeting our climate responsibilities fulfilled by a single or even several decisions by our Select Board or the town's voters.

We expect during our work to lay the groundwork for future actions, decisions, and cycles of policymaking that may extend years into the future.

We have a long way to go in recognizing the urgency of the climate crisis in our local actions. The year 2030 is not far off, and while 2050 may seem distant, actions taken today will be felt before then.

We emphatically urge the Select Board to make climate action a high priority in every decision. For example, in choosing a new director of public works, the town should ensure that candidates recognize the urgency of ending fossil fuel use in public equipment and vehicles. Public comment is sought in this regard.

We expect eventually to consider a few policy areas that lie outside the realm of direct municipal use of fossil fuels, as is permitted in our charge from the Select Board. It is premature to speculate on these.

Finally, the Task Force recognizes there are two sides to the policy response to the climate crisis. One is called mitigation -- the control of the pollution that is the cause of the problem. This is covered by Article 36. The other is called adaptation -- strengthening our community's resilience in the face of climate challenges such as heat waves, floods, and other extreme events. We advise our town's leaders not to tip the scale in one direction or the other, but to address both sides of the climate coin with equal resolve and imagination.

To be approved by consensus of the Task Force on July 29, with revisions.

Attachment

INSERT E.R. table here

FY2019: FF/GHG Sources by Department

Cat.	Sub Cat.	Description	Reference	Fuel/Source	Direct FF	GHGe MT	% of dept	% of TON
FY2019								
0	A	TON GHG emissions	0.A. TON GHG emissions (All)	All	YES	330.95		
0	B	Resident home energy use	0.B. Resident home energy use (All)	All	No			
0	C	Resident transportation energy	0.C. Resident transportation energy (Gasoline)	Gasoline	No			
1	A	Tracy Hall HVAC	1.A. Tracy Hall HVAC (Fuel oil)	Fuel oil	Yes	48.45	100.00%	14.64%
1	B	Tracy Hall generator	1.B. Tracy Hall generator (Propane)	Propane	Yes	0	0.00%	0.00%
1	C	Town Manager - Key D7	1.C. Town Manager - Key D7 (Gasoline)	Gasoline	Yes	0	0.00%	0.00%
				<b>1. Department Subtotal</b>	<b>48.45</b>			<b>14.64%</b>
2	A	Apparatus bay HVAC	2.A. Apparatus bay HVAC (Fuel oil)	Fuel oil	Yes	17.03	100.00%	5.15%
2	B	Safety building generator	2.B. Safety building generator (Propane)	Propane	Yes	0	0.00%	0.00%
				<b>2. Department Subtotal</b>	<b>17.03</b>			<b>5.15%</b>
3	A	DPW HVAC	3.A. DPW HVAC (Propane)	Propane	Yes	36.72	95.20%	11.10%
3	B	DPW- Transfer Station HVAC	3.B. Transfer station HVAC (Propane)	Propane	Yes	1.85	4.80%	0.56%
3	C	DPW generator	3.C. DPW generator (Propane)	Propane	Yes	0	0.00%	0.00%
				<b>3. Department Subtotal</b>	<b>38.57</b>			<b>11.65%</b>
4	A	DPW Diesel fuel - all use - Key A1	4.A. DPW Diesel fuel - all use - Key A1 (Diesel)	Diesel	Yes	170.69	91.04%	51.58%
4	B	DPW Gasoline - Highway - Key D6	4.B. DPW Gasoline - Highway - Key D6 (Gasoline)	Gasoline	Yes	5.77	3.08%	1.74%
4	C	DPW Gasoline -Buildings and grounds - Key	4.C. Buildings and grounds - Key D8 (Gasoline)	Gasoline	Yes	11.03	5.88%	3.33%
				<b>4. Department Subtotal</b>	<b>187.49</b>			<b>56.65%</b>
5	A	NFD - Engine 1 - Key B3	5.A. NFD - Engine 1 - Key B3 (Diesel)	Diesel	Yes	3.26	31.71%	0.99%
5	B	NFD - Engine 2 - Key B2	5.B. NFD - Engine 2 - Key B2 (Diesel)	Diesel	Yes	0.92	8.95%	0.28%
5	C	NFD - Tanker 1 - Key B4	5.C. NFD - Tanker 1 - Key B4 (Diesel)	Diesel	Yes	0.87	8.46%	0.26%
5	D	NFD - Ladder 1 - Key B1	5.D. NFD - Ladder 1 - Key B1 (Diesel)	Diesel	Yes	1.26	12.26%	0.38%
5	E	NFD - Car 1 - Key D9	5.E. NFD - Car 1 - Key D9 (Gasoline)	Gasoline	Yes	3.29	32.00%	0.99%
5	F	NFD - Utility 1 - Key D10	5.F. NFD - Utility 1 - Key D10 (Gasoline)	Gasoline	Yes	0.68	6.61%	0.21%
5	G	NFD - Forestry - Key B5	5.G. NFD - Forestry - Key B5 (Diesel)	Diesel	Yes	0	0.00%	0.00%
				<b>5. Department Subtotal</b>	<b>10.28</b>			<b>3.11%</b>
6	A	NPD - Cruiser 1 - Key D1	6.A. NPD - Cruiser 1 - Key D1 (Gasoline)	Gasoline	Yes	5.32	25.61%	1.61%
6	B	NPD - Cruiser 2 - Key D2	6.B. NPD - Cruiser 2 - Key D2 (Gasoline)	Gasoline	Yes	5.6	26.96%	1.69%
6	C	NPD - Cruiser 3 - Key D3	6.C. NPD - Cruiser 3 - Key D3 (Gasoline)	Gasoline	Yes	2.86	13.77%	0.86%
6	D	NPD - Cruiser 4 - Key D4	6.D. NPD - Cruiser 4 - Key D4 (Gasoline)	Gasoline	Yes	6.99	33.65%	2.11%
				<b>6. Department Subtotal</b>	<b>20.77</b>			<b>6.28%</b>
7	A	Fugitive - TRACY	7.A Fugitive Emissions - Tracy HVAC	Refrigerant	No	2.24	40.22%	0.68%
7	B	Fugitive - Safety Center	7.B Fugitive Emissions - Safety Center HVAC	Refrigerant	No	3.33	59.78%	1.01%
				<b>7 Department Subtotal</b>	<b>5.57</b>			<b>1.68%</b>
8	A	Cemetery Commission lawn care	8.A. Cemetery Commission lawn care (Gasoline)	Gasoline	No	0	0.00%	0.00%
8	B	Water district? - Key D5	8.B. Water district? - Key D5 (Gasoline)	Gasoline	No	2.78	100.00%	0.84%

FY2019: FF/GHG Sources by Department

Cat.	Sub Cat.	Description	Reference	Fuel/Source	Direct FF	GHGe MT	% of dept	% of TON
				<b>8. Department Subtotal</b>		<b>2.78</b>		<b>0.84%</b>
						330.94		100%